

Abstract

An unmanned system for investigating underwater regions utilizes an unmanned mothership and a plurality of unmanned underwater vehicles (UUVs). The mothership transports the UUVs to and from the vicinity of an underwater region, releases the UUVs into the water, and facilitates recovery of the UUVs from the water. Each UUV can traverse an underwater region, generate sonar and image data associated with the underwater region, and transmit the sonar and image data through the water for receipt and re-transmission by the mothership. A docking system mounted partially onboard the mothership and partially onboard each UUV couples each UUV to the mothership and selectively releases each UUV into the underwater region. A guidance system mounted partially onboard the mothership and partially onboard each UUV guides each UUV back to the docking system from positions in the water. The mothership and UUVs can also be equipped with a non-contact electrical energy transfer system so that each UUV can return to the mothership and re-charge onboard batteries while underwater.